

***XENODIPLOSIS LAEVIUSCULI* (RÜBSAAMEN)
(DIPT.: CECIDOMYIIDAE), A SPANGLE GALL INQUILINE
NEW TO IRELAND**

J. P. O'CONNOR

National Museum of Ireland, Kildare Street, Dublin 2, Ireland.

Abstract

Xenodiplosis laeviusculi (Rübsaamen) (Dipt.: Cecidomyiidae) is recorded for the first time from Ireland. The species was reared from larvae found under the common spangle galls of *Neuroterus quercusbaccarum* L. (Cynipidae).

Hymenoptera

Robbins (1997) reported the discovery in Warwickshire, England, of the cecidomyiid *Xenodiplosis laeviusculi* (Rübsaamen) galling the asexual common spangle galls of the cynipid *Neuroterus quercusbaccarum* L. on oaks *Quercus*. Normally, the species affects the asexual smooth spangles of *N. albipes* (Schenck). On 2 November 2001, the author searched oaks in the Phoenix Park, Dublin (Irish grid reference O 0935) for *X. laeviusculi*. Large numbers of the orange larvae were found under common spangles. Despite the presence of numerous silk buttons of *N. numismalis* (Geoffroy in Fourcroy), cupped spangles of *N. tricolor* Hartig and smooth spangles, none of these were infested. As described by Robbins (1997), each larva inhabited a small space between the gall and the leaf. A small number of very small larvae were present in the sample. One spangle gall had two larvae within the space. The incidence of larvae on forty leaves is given in Table 1. Altogether 1,101 spangle galls were examined and 975 (88.55%) of these were unaffected by *X. laeviusculi*. A total of 44 (3.99%) spangle galls had larvae of *X. laeviusculi* while 82 (7.44%) had empty spaces. It is not known if these resulted from the death of larvae or early emergence. Because of the abundance of spangle galls on the Phoenix Park oaks, *X. laeviusculi* was very common there despite its low level of infestation (c.4%). The emergence of *X. laeviusculi* coincided with the emergence of adults of *N. quercusbaccarum* from the sexual currant galls on oaks in the author's garden.

Paralleldiplosis galliperda (Löw) is the cecidomyiid which is stated in the literature to be the inquiline in the spangle galls of *N. quercusbaccarum* while *X. laeviusculi* is associated with the smooth spangles of *N. albipes* (Skuhravá, 1986, 1997). Although the larvae of the former species are white according to Robbins (1997), Skuhravá *et al* (1998) describe the colour as orange-yellow. As a result, it was considered necessary to rear adults from the Dublin material since *X. laeviusculi* would be new to Ireland. Spangle galls containing larvae were carefully detached from leaves and placed lying on moist peat-based gardening compost in a small square bottle which was closed with a lid. Several larvae were observed crawling into the peat. The bottle was stored in an outside passage until March when it was brought indoors. In early May, some larvae were noted crawling on the surface of the peat and pupating. Others pupated within the compost. From 4 June to 13 June

Leaf number	number of unaffected galls	number of empty galls of <i>X. laeviusculi</i>	number of galls with larvae of <i>X. laeviusculi</i>
1	40	5	5
2	42	1	—
3	3	1	1
4	42	—	8
5	17	—	3
7	23	3	1
8	34	8	1
9	55	7	4
10	9	1	—
11	11	—	2
12	39	6	1
13	1	—	—
14	6	—	1
15	26	2	1
16	38	—	—
17	31	2	1
18	27	2	—
19	18	3	1
20	23	—	—
21	20	2	—
22	27	5	1
23	9	—	—
24	28	—	—
25	20	—	2
26	11	3	2
27	52	3	—
28	17	2	—
29	12	3	1
30	25	5	3
31	35	—	—
32	14	2	—
33	20	1	1
34	22	3	1
35	37	3	1
36	17	—	—
37	40	—	2
38	15	2	—
39	17	5	—
40	16	1	—

Table 1. Incidence of larvae of *Xenodiplosis laeviusculi* (Rübsaamen) in common spangle galls on forty oak leaves.

2002, 10♂♂ 10♀♀ of *X. laeviusculi* emerged. The identity of the males was confirmed using Skuhrová (1997) who provides excellent illustrations of the antenna and genitalia of the species. The male antennal segments are very distinctive. Each flagellomere has the middle part of the distal node so constricted that it appears to be divided into three nodes – each with one whorl of circumfilar loops. By contrast, the male flagellome of *P. galliperda* has the middle part of the distal node only slightly constricted. *X. laeviusculi* appears to be a poorly recorded species in Europe. Skuhrová (1986) and Skuhrová *et al.* (1998) give its distribution as the Czech and Slovak Republics, Germany and Great Britain. The larvae of *P. galliperda* are known to suck sap from the gall tissues of its host (Skuhrová *et al.*, 1998). The larvae of *X. laeviusculi* probably behave in a similar manner although little is known about its biology.

Voucher specimens have been deposited in the National Museum of Ireland.

Acknowledgement

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References

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Dingy Skipper *Erynnis tages* (L.) (Lep.: Hesperiiidae) and Northern Brown Argus *Aricia artaxerxes* (Fabr.) (Lep.: Lycaenidae) apparently lost from the Banffshire coast after grazing ceased

The Dingy Skipper *Erynnis tages* maintains a curiously isolated population, well north of its main distribution in Britain, along the dry and sunny inner Moray Firth where the low annual average rainfall rivals that of East Anglia. In the past, the butterfly has extended as far east as Banffshire. There are nineteenth century records, and W. Slater found two colonies near Portknockie in the early 1960s (*Entomologist* **97**: 152). On these grounds, Barbour (1976) included Dingy Skipper in his list of the macrolepidoptera of Banffshire (*Ent. Rec.* **88**: 1-11). The Portknockie record appears as a dot for square NJ 46 on the distribution map in *The Butterflies of Great Britain*